T. McG. MORRIS.

Washing-Machine.

No. 167,267. Patented Aug. 31. 1875.

Fig. 1

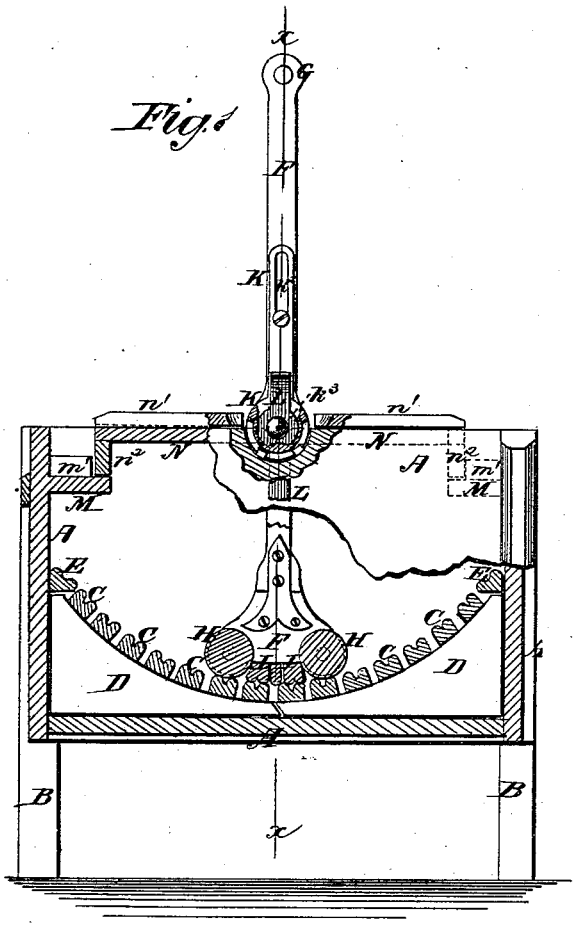


Fig. 2

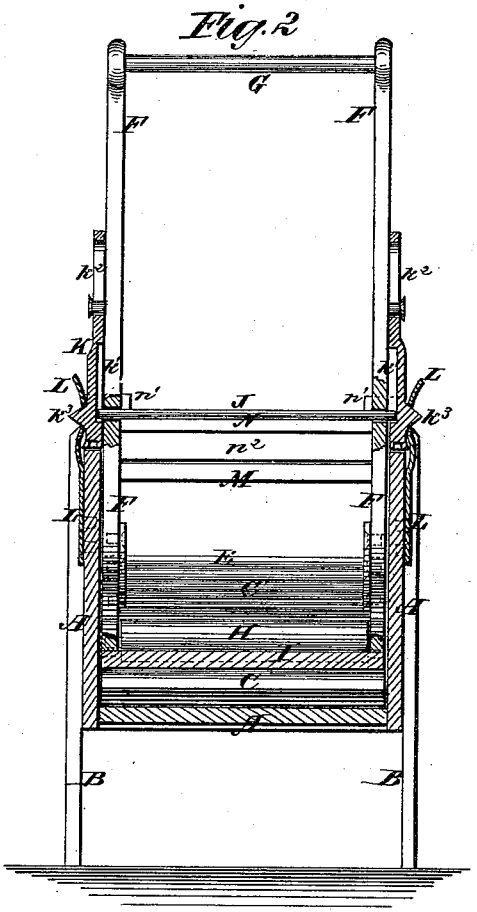


Fig. 3

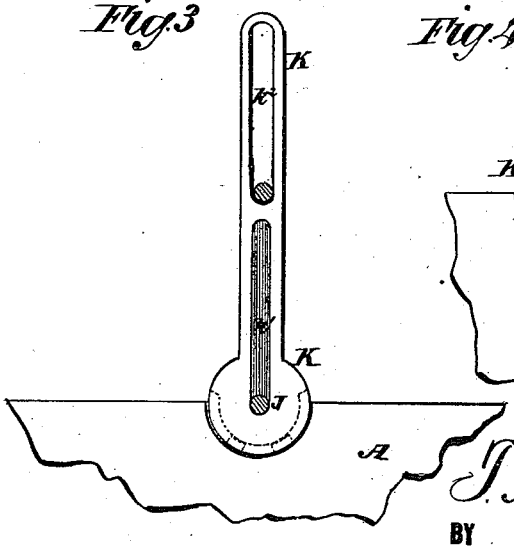
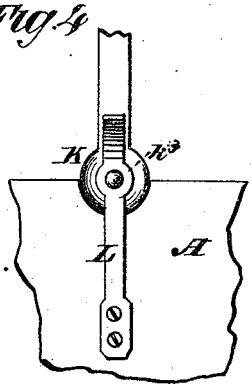


Fig. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS McGUIRE MORRIS, OF WABASH, INDIANA, ASSIGNOR TO HIMSELF AND FREEMAN ALGER, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **167,267**, dated August 31, 1875; application filed June 12, 1875.

To all whom it may concern:

Be it known that I, THOMAS McGUIRE MORRIS, of Wabash, in the county of Wabash and State of Indiana, have invented a new and useful Improvement in Washing-Machine, of which the following is a specification:

Figure 1 is a side view of my improved washing-machine, parts being broken away to show the construction. Fig. 2 is a vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail inside view of one of the adjustment-heads. Fig. 4 is a detail outside view of the lower part of the same and its spring.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved washing-machine, which shall be so constructed that the oscillating rubber will adjust itself to the thickness of the clothes to be operated upon, which may be operated either with or without a cover, and which will allow the stationary rubber to be removed for convenience in cleaning the suds-box.

The invention relates to improvements in the class of washing-machines having an oscillating rubber, and a semicircular bottom for the suds-box, formed of detachable blocks or pieces, with a corrugated rubbing-surface. The improvements consist in the construction and arrangement of parts, as hereinafter described and claimed.

A is the suds-box, which is made rectangular in form, and is supported by four legs, B, attached to its corners. In the lower part of the suds-box A is placed a detachable stationary rubber, which is made in two parts, and is formed by attaching strips or cleats C to the concave edges of the blocks D, which are so formed as to fit into the corners of the said suds-box A, and the inner ends of which meet on an oblique or diagonal line, as shown, so that when one (the right-hand) block has been removed the other may be also removed. In cases where the ends of such blocks meet on a vertical line it is difficult or impossible to remove either without first detaching the strips which confine their outer ends. The upper ends of the angular blocks D rest against cleats E, which should be so formed as to correspond with the cleats C, and which are attached to the sides of the box A. The cleats C are made narrow, have their outer sides or faces corrugated longitudinally, and are attached to the blocks D, with narrow spaces between them to allow the suds to flow through freely.

F are two levers, which pass down along the inner surfaces of the side boards of the box A, and the outer ends of which are connected by a round, G, which serves as a handle in operating the machine. The lower ends of the levers F are widened, or have cross-heads attached to them, the lower sides of which are curved upon the arc of a circle corresponding with the arc of the stationary detachable rubber C D. To and between the ends of the widened lower ends of the levers F are pivoted two rollers, H. To the curved edges of the widened lower ends of the levers F between the rollers H are attached strips I, which form the actual rubber, the rollers H being designed to press down and smooth the clothes before they are rubbed by the strips I, to prevent the buttons from being torn off and the clothes torn.

J is a shaft, which passes through holes in the levers F, and the ends of which enter and work in longitudinal grooves k^1 in the inner sides of the arms of the adjustment-heads *k*. The upper parts of the arms of the heads *k* have slots k^2 formed in them longitudinally for the passage of a screw, which is screwed into the lever F, and thus keeps the said arm in place upon, and in line with, the said lever F. The heads *k* are rounded off into cylindrical form, and fit and work in curved notches in the middle parts of the edges of the side boards of the suds-box A, where they are kept from lateral movement by pins or flanges attached to the side boards of the said box within the said notches, and which enter a groove in the convex surfaces of the heads *k*. By this construction the oscillating rubber can rise to adjust itself to the thickness of the clothes to be operated upon. Upon the outer side of the heads *k* are formed conical knobs k^3, which enter holes in the upper

parts of the springs L. The lower ends of the springs L are attached to the sides of the suds-box A. By this construction the springs L hold the heads *k*, and prevent them from rising with the levers F as the rubber H 1 rises to adjust itself to the thickness of the clothes to be operated upon. The conical shape of the knobs k^3 enables the heads *k* to be readily inserted in, and withdrawn from, their places, when desired, by pressing back the springs L. The parts M form the permanent portion of the top of the suds-box, and N n^1 n^2 is the detachable cover.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the grooved, slotted, and knobbed adjustment-heads *k*, and their locking-springs L, with the pivoting-rod J and the levers F of the oscillating rubber H I, and with the suds-box A, substantially as herein shown and described.

THOMAS McGUIRE MORRIS.

Witnesses:

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